

Jurgen Van Erps

List of Publications by Year in descending order

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148
papers

1,862
citations

279487

23
h-index

301761

39
g-index

148
all docs

148
docs citations

148
times ranked

2036
citing authors

#	ARTICLE	IF	CITATIONS
1	On the potential use of two-photon polymerization to 3D print chromatographic packed bed supports. Journal of Chromatography A, 2022, 1663, 462763.	1.8	9
2	Design and demonstration of a six-channel multiresolution imaging system. Applied Optics, 2022, 61, 2683.	0.9	2
3	Laser direct writing of short-range interconnect interfacing structures. , 2022, , .		0
4	3D nanoprinting of mode-field conversion tapers for low-loss optical interfacing of single-mode fibers and photonic integrated circuits. , 2021, , .		0
5	General measurement technique of the ratio between chromatic dispersion and the nonlinear coefficient. , 2021, , .		0
6	Design and Fabrication of Straight Waveguides, Tapers and S-Bends with Two-Photon Direct Laser Writing. , 2021, , .		0
7	Design and two-photon direct laser writing of low-loss waveguides, tapers and S-bends. JPhys Photonics, 2021, 3, 045001.	2.2	14
8	Thiol-norbornene gelatin hydrogels: influence of thiolated crosslinker on network properties and high definition 3D printing. Biofabrication, 2021, 13, 015017.	3.7	34
9	Miniature freeform flow-line lightguide for sensing: from design to fabrication. Optics Express, 2021, 29, 38001.	1.7	3
10	Increasing the Microfabrication Performance of Synthetic Hydrogel Precursors through Molecular Design. Biomacromolecules, 2021, 22, 4919-4932.	2.6	6
11	Two-Photon Polymerization-based Direct Laser Writing and Characterization of Micro-Lenses for Optical Interconnect Applications. , 2021, , .		1
12	Design and replication of a six-channel foveated imaging system. , 2021, , .		0
13	Ultraprecision Diamond Milling of a Freeform Micromirror Array Master for Nanoimprint Lithography. , 2021, , .		0
14	Two-Photon Polymerization-based Laser Direct Writing of Mode Conversion Down-tapers for Physical Contact Fiber-to-Chip Coupling. , 2021, , .		1
15	Mode-field Matching Down-Tapers on Single-Mode Optical Fibers for Edge Coupling Towards Generic Photonic Integrated Circuit Platforms. Journal of Lightwave Technology, 2020, 38, 4834-4842.	2.7	19
16	SERS using two-photon polymerized nanostructures for mycotoxin detection. RSC Advances, 2020, 10, 14274-14282.	1.7	16
17	Miniaturized broadband spectrometer based on a three-segment diffraction grating for spectral tissue sensing. Optics and Lasers in Engineering, 2020, 134, 106157.	2.0	15
18	Designer Descemet Membranes Containing PDLLA and Functionalized Gelatins as Corneal Endothelial Scaffold. Advanced Healthcare Materials, 2020, 9, e2000760.	3.9	25

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19	3D direct laser writing of microstructured optical fiber tapers on single-mode fibers for mode-field conversion. Optics Express, 2020, 28, 36147.	1.7	24
20	Measurement of the soliton number in guiding media through continuum generation. Optics Letters, 2020, 45, 4432.	1.7	9
21	Mode-field matching design, 3D fabrication and characterization of down-tapers on single-mode optical fiber tips for coupling to photonic integrated circuits. , 2020, , .		0
22	(Photo-)crosslinkable gelatin derivatives for biofabrication applications. Acta Biomaterialia, 2019, 97, 46-73.	4.1	120
23	Down-scaling grating couplers and waveguides in single-crystal diamond for VIS-UV operation. JPhys Photonics, 2019, 1, 015003.	2.2	4
24	Technological advancements for the development of stem cell-based models for hepatotoxicity testing. Archives of Toxicology, 2019, 93, 1789-1805.	1.9	15
25	Two-photon direct laser writing of beam expansion tapers on single-mode optical fibers. Optics and Laser Technology, 2019, 112, 292-298.	2.2	18
26	Directional Coupler Based on Single-Crystal Diamond Waveguides. IEEE Journal of Selected Topics in Quantum Electronics, 2018, 24, 1-9.	1.9	9
27	Evaluation of 3D-culture methods for the hepatic differentiation of human skin-derived stem cells. Toxicology Letters, 2018, 295, S111.	0.4	0
28	Localized optical-quality doping of graphene on silicon waveguides through a TFSA-containing polymer matrix. Journal of Materials Chemistry C, 2018, 6, 10739-10750.	2.7	2
29	Graphene's nonlinear-optical physics revealed through exponentially growing self-phase modulation. Nature Communications, 2018, 9, 2675.	5.8	67
30	Highly Reactive Thiol-Norbornene Photo-Click Hydrogels: Toward Improved Processability. Macromolecular Rapid Communications, 2018, 39, e1800181.	2.0	77
31	Relaxing alignment tolerance in single-mode fiber connections using 3D nanoprinted beam expanders. , 2018, , .		0
32	Indirect Rapid Prototyping: Opening Up Unprecedented Opportunities in Scaffold Design and Applications. Annals of Biomedical Engineering, 2017, 45, 58-83.	1.3	40
33	Cross-Linkable Gelatins with Superior Mechanical Properties Through Carboxylic Acid Modification: Increasing the Two-Photon Polymerization Potential. Biomacromolecules, 2017, 18, 3260-3272.	2.6	104
34	Optofluidic Chip for Single-Beam Optical Trapping of Particles Enabling Confocal Raman Measurements. IEEE Journal of Selected Topics in Quantum Electronics, 2017, 23, 176-184.	1.9	2
35	Prototyping and Replication of Polymer Freeform Optical Components. , 2017, , .		1
36	Optical trapping of particles combined with confocal Raman spectroscopy in an optofluidic chip. , 2017, , .		0

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37	Fabrication of High-Precision Micro-Opto-Mechanical Components through Deep Proton Writing. , 2017, , .		0
38	Modeling, Fabrication and Testing of Hybrid Lenses in a Multichannel, Multiresolution Imaging System. , 2017, , .		0
39	Optofluidic Chips for Raman Spectroscopy and Optical Trapping. , 2017, , .		0
40	Specular gloss versus surface topography for oil-filled nanoparticle coatings on paper. Color Research and Application, 2016, 41, 596-610.	0.8	2
41	Patterning of graphene on silicon-on-insulator waveguides through laser ablation and plasma etching. , 2016, , .		0
42	Proof-of-concept demonstration of free-form optics enhanced confocal Raman spectroscopy in combination with optofluidic lab-on-chip. Proceedings of SPIE, 2016, , .	0.8	0
43	Deep proton writing of high aspect ratio SU-8 micro-pillars on glass. Nuclear Instruments & Methods in Physics Research B, 2016, 389-390, 5-12.	0.6	2
44	Low-Loss Millimeter-Length Waveguides and Grating Couplers in Single-Crystal Diamond. Journal of Lightwave Technology, 2016, 34, 5576-5582.	2.7	15
45	Design and prototyping of self-centering optical single-mode fiber alignment structures. Journal of Micromechanics and Microengineering, 2016, 26, 065007.	1.5	7
46	Negative Kerr Nonlinearity of Graphene as seen via Chirped-Pulse-Pumped Self-Phase Modulation. Physical Review Applied, 2016, 6, .	1.5	68
47	Hot-embossing replication of self-centering optical fiber alignment structures prototyped by deep proton writing. Optical Engineering, 2016, 55, 076112.	0.5	6
48	Deep proton writing with 12ÂMeV protons for rapid prototyping of microstructures in polymethylmethacrylate. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2016, 15, 044501.	1.0	3
49	Plasma treatment of fiber facets for increased (de)mating endurance in physical contact fiber connectors. , 2016, , .		0
50	Replication of self-centering optical fiber alignment structures using hot embossing. Proceedings of SPIE, 2016, , .	0.8	1
51	Dual fiber optical trapping in a polymer-based microfluidic chip. , 2016, , .		0
52	Optofluidic multi-measurement system for the online monitoring of lubricant oil. Measurement Science and Technology, 2016, 27, 015004.	1.4	1
53	Relation between optical non-contact profilometry and AFM roughness parameters on coated papers with oil-filled nanoparticles. Measurement: Journal of the International Measurement Confederation, 2016, 82, 75-93.	2.5	16
54	Novel microfluidic devices for Raman spectroscopy and optical trapping. , 2016, , .		0

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55	Laser ablation- and plasma etching-based patterning of graphene on silicon-on-insulator waveguides. Optics Express, 2015, 23, 26639.	1.7	23
56	Mass-manufacturable polymer microfluidic device for dual fiber optical trapping. Optics Express, 2015, 23, 30991.	1.7	17
57	Prototyping and replication of polymer freeform micro-optical components. , 2015, , .		0
58	Modeling and design of a multichannel chromatic aberration compensated imaging system. , 2015, , .		0
59	Free-Form Optics Enhanced Confocal Raman Spectroscopy for Optofluidic Lab-on-Chips. IEEE Journal of Selected Topics in Quantum Electronics, 2015, 21, 79-86.	1.9	20
60	Mould insert fabrication of a single-mode fibre connector alignment structure optimized by justified partial metallization. Journal of Micromechanics and Microengineering, 2015, 25, 035008.	1.5	10
61	Flow-cytometric identification of vinegars using a multi-parameter analysis optical detection module. , 2015, , .		0
62	Indirect additive manufacturing as an elegant tool for the production of self-supporting low density gelatin scaffolds. Journal of Materials Science: Materials in Medicine, 2015, 26, 247.	1.7	38
63	Proof-of-concept demonstration of a miniaturized multi-resolution refocusing imaging system using an electrically tunable lens. Proceedings of SPIE, 2014, , .	0.8	0
64	Opto-mechanical design of a buckling cavity in a novel high-performance outside-plant robust field installable single-mode fibre connector. Proceedings of SPIE, 2014, , .	0.8	0
65	Two-channel multiresolution refocusing imaging system using a tunable liquid lens. Applied Optics, 2014, 53, 4002.	0.9	9
66	Design of large scale plasmonic nanoslit arrays for arbitrary mode conversion and demultiplexing. Optics Express, 2014, 22, 646.	1.7	10
67	Total internal reflection-based module for fluorescence and absorbance detection. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2014, 13, 033001.	1.0	7
68	Self-centering fiber alignment structures for high-precision field installable single-mode fiber connectors. Proceedings of SPIE, 2014, , .	0.8	3
69	Optomechanical design of a buckling cavity in a low-cost high-performance ferruleless field-installable single-mode fiber connector. Optical Engineering, 2014, 53, 106102.	0.5	2
70	Proof-of-concept demonstration of a total internal reflection based module for fluorescence and absorbance detection using a 3D-printed syringe pump. Proceedings of SPIE, 2014, , .	0.8	2
71	Advanced simulation tool for optical time-domain reflectometry (OTDR) with arbitrary pulse shapes. , 2014, , .		0
72	Proof-of-concept demonstration of a miniaturized three-channel multiresolution imaging system. Proceedings of SPIE, 2014, , .	0.8	1

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73	Exploration and classification of chromatographic fingerprints as additional tool for identification and quality control of several Artemisia species. Journal of Pharmaceutical and Biomedical Analysis, 2014, 95, 34-46.	1.4	39
74	Optical Time-Domain Reflectometry Simulations of Passive Optical Networks: A Linear Time-Invariant System Approach for Arbitrary Pulses. Journal of Lightwave Technology, 2014, 32, 3008-3019.	2.7	4
75	Replicating micro-optical structures using soft embossing technique. , 2014, , .		1
76	Design of large scale plasmonic nanoslit arrays for arbitrary mode conversion and demultiplexing. Proceedings of SPIE, 2014, , .	0.8	0
77	Micro-Optics Technology Supply Chain as Key-enabler for Applied Research and Industrial Innovation. , 2014, , .		0
78	Deep Proton Writing for the rapid prototyping of polymer micro-components for optical interconnects and optofluidics. Nuclear Instruments & Methods in Physics Research B, 2013, 307, 243-247.	0.6	8
79	Energy-per-Bit Limits in Plasmonic Integrated Photodetectors. IEEE Journal of Selected Topics in Quantum Electronics, 2013, 19, 3800210-3800210.	1.9	12
80	Demonstration of a multichannel, multiresolution imaging system. Applied Optics, 2013, 52, 6081.	0.9	31
81	Low-coherence interferometry with polynomial interpolation on Compute Unified Device Architecture-enabled graphics processing units. Optical Engineering, 2013, 52, 094105.	0.5	11
82	Energy-per-bit and noise limits in plasmonic intergrated photodetectors. Proceedings of SPIE, 2013, , .	0.8	0
83	B-CALM: AN OPEN-SOURCE MULTI-GPU-BASED 3D-FDTD WITH MULTI-POLE DISPERSION FOR PLASMONICS. Progress in Electromagnetics Research, 2013, 138, 467-478.	1.6	10
84	Gloss, hydrophobicity and surface texture of papers with organic nanoparticle coatings. Nordic Pulp and Paper Research Journal, 2013, 28, 28-41.	0.3	2
85	Multi-order, automatic dispersion compensation for 1.28 Terabaud signals. , 2012, , .		0
86	Rapid prototyping of interfacing microcomponents for printed circuit board-level optical interconnects. Proceedings of SPIE, 2012, , .	0.8	0
87	Design and fabrication of advanced fiber alignment structures for field-installable fiber connectors. Proceedings of SPIE, 2012, , .	0.8	0
88	Similarity analyses of chromatographic fingerprints as tools for identification and quality control of green tea. Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences, 2012, 910, 61-70.	1.2	63
89	Photonic-Chip-Based Ultrafast Waveform Analysis and Optical Performance Monitoring. IEEE Journal of Selected Topics in Quantum Electronics, 2012, 18, 834-846.	1.9	3
90	OSNR Monitoring of a 1.28 Tbaud Signal by Interferometry Inside a Wavelength-Selective Switch. Journal of Lightwave Technology, 2011, 29, 1542-1546.	2.7	9

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91	Single parameter optimization for simultaneous automatic compensation of multiple orders of dispersion for a 128 Tbaud signal. Optics Express, 2011, 19, 25512.	1.7	9
92	Automatic higher-order dispersion measurement and compensation of a 1.28 Tbaud signal. , 2011, , .		0
93	Ultrathin Optoelectronic Device Packaging in Flexible Carriers. IEEE Journal of Selected Topics in Quantum Electronics, 2011, 17, 617-628.	1.9	44
94	Paper coatings with multi-scale roughness evaluated at different sampling sizes. Applied Surface Science, 2011, 257, 5613-5625.	3.1	29
95	Satellite payloads with optical interconnects: Solving the bandwidth bottleneck in space. , 2011, , .		0
96	OSNR monitoring of a 1.28 Tbit/s signal using a reconfigurable Wavelength Selective Switch. , 2011, , .		0
97	Design and fabrication of embedded micro-mirror inserts for out-of-plane coupling in PCB-level optical interconnections. , 2010, , .		1
98	Automatic higher-order dispersion measurement and compensation of a 1.28 Tbaud signal. , 2010, , .		0
99	Populating multi-fiber fiberoptic connectors using an interferometric measurement of fiber tip position and facet quality. Proceedings of SPIE, 2010, , .	0.8	0
100	Optical sampling of ultrahigh bitrate signals using highly nonlinear chalcogenide planar waveguides or tapered fibers. Proceedings of SPIE, 2010, , .	0.8	0
101	High density optical pressure sensor foil based on arrays of crossing flexible waveguides. Proceedings of SPIE, 2010, , .	0.8	3
102	Optical interconnects for satellite payloads: overview of the state-of-the-art. , 2010, , .		1
103	Deep proton writing: a powerful rapid prototyping technology for various micro-optical components. , 2010, , .		1
104	Design and Tolerance Analysis of Out-of-Plane Coupling Components for Printed-Circuit-Board-Level Optical Interconnections. IEEE Journal of Selected Topics in Quantum Electronics, 2010, 16, 1347-1354.	1.9	5
105	High-resolution optical sampling of 640â€¦Gbit/s data using dispersion-engineered chalcogenide photonic wire. Electronics Letters, 2010, 46, 223.	0.5	31
106	In Situ Interferometric Monitoring of Fiber Insertion in Fiber Connector Components. IEEE Photonics Technology Letters, 2010, 22, 60-62.	1.3	7
107	100 nm period grating by high-index phase-mask immersion lithography. Optics Express, 2010, 18, 10557.	1.7	18
108	Automatic dispersion compensation for 128Tb/s OTDM signal transmission using photonic-chip-based dispersion monitoring. Optics Express, 2010, 18, 25415.	1.7	14

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109	High-Resolution Optical Sampling of 640-Gb/s Data Using Four-Wave Mixing in Dispersion-Engineered Highly Nonlinear As ₂ S ₃ Planar Waveguides. Journal of Lightwave Technology, 2010, 28, 209-215.	2.7	47
110	High-resolution optical sampling by means of dispersionshifted highly nonlinear chalcogenide waveguides. , 2009, , .		2
111	High-resolution optical sampling of 640-Gb/s signals using highly nonlinear chalcogenide waveguides. , 2009, , .		0
112	MT-compatible interface between peripheral fiber ribbons and printed circuit board-integrated optical waveguides. Proceedings of SPIE, 2009, , .	0.8	2
113	Mass Manufacturable 180° Bend Single-Mode Fiber Socket Using Hole-Assisted Low Bending Loss Fiber. IEEE Photonics Technology Letters, 2008, 20, 187-189.	1.3	9
114	Embedded Micromirror Inserts for Optical Printed Circuit Boards. IEEE Photonics Technology Letters, 2008, 20, 1727-1729.	1.3	20
115	Hot Embossing of Microoptical Components Prototyped by Deep Proton Writing. IEEE Photonics Technology Letters, 2008, 20, 1539-1541.	1.3	29
116	Design and tolerance analysis of a low bending loss hole-assisted fiber using statistical design methodology. Optics Express, 2008, 16, 5061.	1.7	16
117	Interferometric method for in-situ monitoring of fiber insertion in 2D fiber connectors fabricated through Deep Proton Writing. , 2008, , .		1
118	Coupling structures for out-of-plane coupling in optical PCBs. , 2008, , .		0
119	Characterization of the optical parameters of high aspect ratio polymer micro-optical components. , 2008, , .		1
120	Enhanced pluggable out-of-plane coupling components for printed circuit board-level optical interconnections. Proceedings of SPIE, 2008, , .	0.8	3
121	Replication of deep micro-optical components prototyped by Deep Proton Writing. , 2008, , .		7
122	Replication of micro-optical components and nano-structures for mass production. , 2008, , .		5
123	A low loss 180 degrees coupling fiber socket making use of low bending loss hole-assisted fiber. Proceedings of SPIE, 2008, , .	0.8	0
124	Fabrication method to create high-aspect ratio pillars for photonic coupling of board level interconnects. Proceedings of SPIE, 2008, , .	0.8	1
125	Low-Cost Micro-Optical Modules for Datacommunication to Optical Interconnections from the LAN-to the PCB-Level. , 2007, , .		0
126	Elastomeric inverse moulding and vacuum casting process characterization for the fabrication of arrays of concave refractive microlenses. Journal of Micromechanics and Microengineering, 2007, 17, 81-88.	1.5	210

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127	Low-cost micro-optics for PCB-level photonic interconnects. , 2007, 6476, 162.		2
128	Sensing with photonic crystal fibres. , 2007, , .		3
129	SPAD arrays and micro-optics: towards a real single photon spectrometer. Journal of Modern Optics, 2007, 54, 199-212.	0.6	19
130	<title>Sensing applications of photonic crystal fibres</title>. , 2007, , .		1
131	Sensing properties of Bragg grating in highly birefringent and single mode photonic crystal fiber. , 2007, , .		2
132	Tolerance Analysis for Multilayer Optical Interconnections Integrated on a Printed Circuit Board. Journal of Lightwave Technology, 2007, 25, 2395-2401.	2.7	18
133	Laser Ablated Micromirrors for Printed Circuit Board Integrated Optical Interconnections. IEEE Photonics Technology Letters, 2007, 19, 822-824.	1.3	20
134	Discrete Out-of-Plane Coupling Components for Printed Circuit Board-Level Optical Interconnections. IEEE Photonics Technology Letters, 2007, 19, 1753-1755.	1.3	29
135	A new generation of low-voltage single-photon micro-sensors with timing capability. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 567, 83-88.	0.7	12
136	Laser ablation of parallel optical interconnect waveguides. IEEE Photonics Technology Letters, 2006, 18, 1106-1108.	1.3	50
137	High-precision 2-D SM fiber connectors fabricated through deep proton writing. IEEE Photonics Technology Letters, 2006, 18, 1164-1166.	1.3	24
138	Enhanced cross phase modulation instability in birefringent photonic crystal fibers in the anomalous dispersion regime. Optics Express, 2006, 14, 8290.	1.7	12
139	AFM benchmark for the profile characterisation of subwavelength diffractive elements within the EC Network of Excellence on Micro-Optics (NEMO). , 2006, , .		0
140	Development of a fabrication technology for integrating low cost optical interconnects on a printed circuit board. , 2006, 6126, 25.		1
141	Roughness measurements on coupling structures for optical interconnections integrated on a printed circuit board. , 2006, , .		0
142	Laser-ablated coupling structures for stacked optical interconnections on printed circuit boards. , 2006, , .		6
143	Prototyping micro-optical components with integrated out-of-plane coupling structures using deep lithography with protons. , 2006, 6185, 33.		6
144	Deep proton writing: a rapid prototyping polymer micro-fabrication tool for micro-optical modules. New Journal of Physics, 2006, 8, 270-270.	1.2	41

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145	Embedded laser ablated micro-mirrors for intra- and out-of-plane coupling in multilayer optical interconnects. , 2006, , .		0
146	Deep lithography with protons to prototype pluggable micro-optical out-of-plane coupling structures for multimode waveguides. , 2005, , .		2
147	A single photon spectrometer for biomedical applications. , 2005, , .		5
148	Design and implementation of an on-campus free-space laser datalink: a photonics case study for electrical and photonic engineering students. , 2004, 5578, 756.		0